

Doc Code: AP.PRE.REQ



PTO/SB/33 (08-08)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

TAIW 813

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Application Number

10/619,591

Filed

July 16, 2003

First Named Inventor

Shih-Hsien WU

Art Unit

2811

Examiner

Ori Nadav

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 38,075

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Robert H. Berdo, Jr.

Typed or printed name

202-371-8976

Telephone number

October 21, 2008

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Group art unit: 2811
Examiner: Ori Nadav
Conf. No.: 7448

In Re PATENT APPLICATION of:

Applicants: Shih-Hsien WU et al.

Serial No.: 10/619,591

Filed: July 16, 2003

For: COMPOSITE LAMINATED SUBSTRATE
COMPOSED OF LAMINATED INORGANIC
AND ORGANIC SUBSTRATES

Docket No.: TAIW 813

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) **PRE-APPEAL**
) **BRIEF REQUEST**
) **FOR REVIEW**
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October 21, 2008

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Examiner Nadav:

ARGUMENTS ACCOMPANYING
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants hereby request panel review of the Examiner's final rejections presented in the Examiner's Action mailed on April 22, 2008. Additionally attached to this Pre-Appeal Brief Request for Review is a Notice of Appeal, together with a Petition for an Extension of Time, in addition to the requisite fees.

The rejections presented within the Examiner's Action are clearly improper based on the following errors in facts.

The Examiner's rejection of claim 60 under 35 USC section 112, 1st paragraph, as failing to comply with the written description requirement is improper. As discussed on page 9 of Applicants' last filed Amendment (filed on January 22, 2008), page 6, lines 1-3 of the original disclosure recited that the inorganic substrate 10 is fully covered by the organic substrate 20. Similar recitation can also be found on page 6, line 20. Further support from the original disclosure can be found from figures 3 and 5, which illustrate the inorganic

substrate 10 being fully covered by the organic substrates 20. The Board is respectfully directed to the fact that claim 60 had been amended to change the original recitation from “fully imbedded” to “fully covered”, to comply with the written description requirement, and to correspond to the figures 3 and 5. It is noted that “fully covered” and “fully imbedded” have two different meanings, with the term “covered” typically meaning to go over and/or under the object. Simply because the organic substrates 20 do not extend down the sides of the inorganic substrate 10 does not take away from the fact that the organic substrates fully cover the inorganic substrate, as shown in figures 3 and 5, and as recited in claim 60. Further, and as noted above, Applicants’ specification does provide a written description of this recitation, so the Examiner’s rejection is clearly misplaced.

The Examiner’s rejection of independent claim 37 is improper. As discussed in Applicants’ last filed Amendment, on page 11, first paragraph, the post 14 disclosed by Shaheen is not imbedded within the ceramic layer 18, as would be required by Applicants’ claimed invention. Instead, ceramic layer 18 is provided with a hole 20 to allow the post 14 to pass freely therethrough, and to prevent contact between the post 14 and ceramic layer 18. At best, this post 14 could be considered as being imbedded within the adhesive 16. However, simply because the adhesive 16 is touching both the post 14, as well as the ceramic layer 18 does not allow for the interpretation of the post 14 being imbedded in the ceramic layer 18. Such an interpretation would take any meaning away from the term “imbedded”, which infers a direct physical engagement between two touching features. Further, it is noted that the Shaheen reference teaches away from imbedding the post within the ceramic layer 18, since this reference discloses that it is necessary to separate the post 14 from the ceramic layer 18, due to the differences in thermal coefficients of expansion of the ceramic layer 18 and the post 14. This reference discloses that if the post 14 were imbedded in the ceramic layer 18, that these two layers would then be directly touching, and stress would be provided between the ceramic layer 18 and the post 14, which this reference teaches as being undesirable. Thus, this reference does not disclose or suggest an inorganic substrate having at least one passive component imbedded therein, as recite by claim 37.

Applicants' dependent claim 41 is submitted to be patentably distinguishable over Shaheen, Hashemi et al., and further in view of Nishide et al. for at least the following reasons. This claim recites that the at least one passive component that is imbedded in the inorganic substrate is selected from the group consisting of a capacitor, an inductor, and/or a resistor. It appears to be the Examiner's contention that the capacitors 4 and coils 5, which are disclosed by Nishide et al., can be used in the device of Shaheen et al., presumably by replacing the post 14 of Shaheen et al. with the capacitors 4 or coils 5 of Nishide et al. However, it is unclear how such a modification would be implemented, since the entire purpose of the Shaheen et al. patent is to provide a post that can be utilized with organic and ceramic layers, without causing stress between the ceramic layer and the post (see column 2, line 56-61). Thus, it is respectfully submitted that to replace the post 14 disclosed by Shaheen et al. with, for example the capacitor 4 or coil 5 of Nishide et al. would destroy the functionality of the Shaheen et al. invention, since there would no longer be a means for interconnecting the surface traces 22 with the underlying organic layer 10. Moreover, there is no disclosure or suggestion from the cited references for any motivation to have included additional imbedded passive components, much less a capacitor, an inductor, and/or a resistor, within the ceramic layer 18 of Shaheen et al.

Furthermore, claim 63 recites that the at least one passive component is separated from, so as to not directly contact the organic substrate. Shaheen et al. specifically teach away from this feature, since it is necessary for the post 14 to directly contact the organic layer 10 in order to provide its electrical conduction between the surface traces 22 and the organic layer 10. To separate the post 14 from the organic layer 10 would destroy its functionality.

Applicants' independent claim 49 is patentably distinguishable over the cited references for reasons similar to those presented above with respect to independent claim 37, that is, the cited references do not disclose or suggest at least one passive component formed on or imbedded in an inorganic substrate. As noted above, the Examiner's Action had equated the post 14 of Shaheen with being a passive element. However, post 14 is not imbedded in or formed on ceramic layer 18.

Further, as discussed in Applicants' last filed Amendment on page 12, the primary reference of Shaheen specifically discloses that all of the layers of the multilayer substrate except for the outer layer, are organic layers. Thus, since this reference teaches that the outer layer is the only ceramic (inorganic) layer, then the reference teaches away from a ceramic (inorganic) layer that has two organic substrates laminated on respective sides thereof. Thus, one skilled in the art would not have had any motivation to have modified Shaheen, for the reasons discussed on page 13 of Applicants' last filed Amendment. Thus, contrary to the Examiner's assertion on page 10 of the Office Action, Shaheen does teach away from Applicants' claimed invention, and teaches away from the proposal suggested by the Examiner's Action.

Moreover, as discussed in detail in the Amendment filed on September 4, 2007, pages 11-14, Berger et al. do not disclose or suggest a composite laminated substrate, as recited in the claims. As such, Berger et al. do not overcome the admitted deficiencies of Shaheen and Hashemi et al. (see page 5 of Examiner's Action).

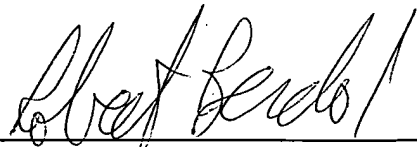
Further, claim 53 is patentable over the cited references for similar reasons as to those presented above with respect to claim 41, and claim 62 is patentable over the cited combination of references for reasons similar to those presented above with respect to dependent claim 63. It is thus requested that this Board review the Examiner's final rejections, and reverse the decisions presented therein.

The Director is hereby authorized to charge any requisite fee to our deposit account No. 18-0002.

Respectfully submitted,

October 21, 2008
Date

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